Clean Air Act Compliance Inspection Report

United States Environmental Protection Agency
Region 10 – Seattle, WA

Clean Air Act Full Compliance Evaluation Inspection Report

Mac Manufacturing Inc.
d.b.a Technical Finishes and Coatings Inc.
Portland, Oregon

Inspection Date: July 14, 2022

BRENDAN WHYTE Digitally signed by BRENDAN WHYTE Date: 2022.09.20 16:55:23 -07'00'

Brendan Whyte, Report Author — Date
CAA/TRI Inspector
EPA Region 10

ELIZABETH WALTERS Digitally signed by ELIZABETH WALTERS Date: 2022.09.20 20:27:35 -07'00'

Elly, Walters, Peer Reviewer — Date
CAA Inspector
EPA Region 10

JOHN KEENAN Digitally signed by JOHN KEENAN Date: 2022.09.21 11:17:12 -07'00'

Derrick Terada, Section Chief — Date
ATES Section Chief
EPA Region 10

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Attachments

1. Basic Facility and Inspection Information

Facility Address:	Mac Manufacturing 9120 SE 64th Avenue Portland, OR 97206
Mailing Address:	Mac Manufacturing 9120 SE 64th Avenue Portland, OR 97206
AFS/FRS Number:	110000909526
SIC:	3471 (Electroplating, Plating, Polishing, Anodizing, and Coloring)
NAICS:	332813 (Electroplating, Plating, Polishing, Anodizing, and Coloring)
Permit Number:	03-0027-26-01 (AQGP-026)
Facility Contacts:	Cody Standridge President/Owner Mac Manufacturing Inc. cody@tfcplating.com Mike Brown Operations Manager Mac Manufacturing Inc. mike@tfcplating.com
U.S. EPA Inspectors:	Brendan Whyte Air and Toxics Enforcement Section (ATES) Enforcement and Compliance Assurance Division (ECAD) U.S. EPA Region 10 1200 Sixth Ave. Seattle, WA 98101-3188 (206) 553-1389 whyte.brendan@epa.gov Elly Walters ATES, ECAD U.S. EPA Region 10 1200 Sixth Ave. Seattle, WA 98101-3188 (206) 553-6317 walters.elizabeth@epa.gov

Date of Inspection: July 14, 2022

Inspection Start/End Times: 12:45 PM – 2:20 PM

Inspection Notice: This was an unannounced inspection.

2. Purpose of Inspection

This was a Clean Air Act (CAA) compliance inspection by the Environmental Protection Agency (EPA). Inspector Whyte, EPA Region 10, led the inspection. EPA Region 10 coordinated with the Oregon Department of Environmental Quality (ODEQ) beforehand and Inspector Elaine Go, of ODEQ, joined the inspection. The purpose was to identify potential compliance concerns with CAA regulations, specifically to gather information in order to determine if facility is in subject to and in compliance with the 40 C.F.R. Part 63, National Emissions Standards for Hazardous Air Pollutants (NESHAPs) for Area Source Standards for Plating and Polishing Operations (Subpart WWWWWW) and for Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks (Subpart N).

3. Inspection Disclaimer

This report is a summary of observations and information gathered from the facility at the time of the inspection, a conference call and from a subsequent records review. The information provided does not constitute a final decision on compliance with CAA regulations or applicable permits, nor is it meant to be a comprehensive summary of all activities and processes conducted at the facility.

4. Facility Description and Background

The following facility description is based on information provided by a facility representative in the opening conference, on the facility's website[1] as well as a written response by the facility to EPA's records requests.

Technical Finishes and Coatings Inc. was founded over 35 years ago, according to the company website, though the facility representatives on site were relatively new, and could not provide detailed information on the company history. Technical Finishes and Coatings Inc. was registered with the Oregon Secretary of State[2] in 1992 by Kenneth Johnson and dissolved in March of 2020 following the sale of the business to Cody Standridge in 2019. The latter registered Mac Manufacturing Inc. with the Oregon Secretary of State in August of 2019.

[1] http://tfcplating.com/

[2] https://sos.oregon.gov/business/pages/find.aspx

Mac manufacturing offers a variety of plating services, including copper, nickel, bright nickel, silver, tin, electrolytic zinc, and several types of electroless chromate conversion. The facility also offers passivation services. The facility consists of one building located in a business park, with a small office area on the western side, and the plating floor taking up most of the space. The plating floor consists of a hand plating line, a hoist plating line, a small finishing area, storage, and a wastewater processing area.

The facility operates under a general permit from ODEQ.

5. Compliance History

Under the previous management of Mr. Johnson, the facility was the site of several environmental infractions in 2017 which resulted in a criminal investigation. In 2019 both Mr. Johnson and his foreman, pled guilty to different criminal charges relating to falsely representing hazardous waste as non-hazardous and improperly disposing of it, and illegally disposing of untreated wastewaters into the city water system.

At some point in this process (or possibly earlier) Mr. Johnson was required by the City of Portland to fill all of the floor drains at the facility with cement, making it impossible to discharge water to the sewer system.

6. Inspection Elements/Order

a. Pre-Inspection Observations

As Inspectors Walters, Go, and I left our vehicles and crossed the parking lot to the facility we observed two facility employees on a cigarette break. As we approached, the employees ran inside of the plating area and we did not observe any facility employees for the rest of the walkthrough, with two exceptions noted later.

b. Entry and Opening Conference with facility representatives

Inspectors Walters, Go, and I entered the facility at about 12:45 PM. We were greeted in the front office by an employee at the front desk. I presented my credentials and explained that this was an unannounced CAA inspection. The employee then called Mike Brown, Operations Manager, who greeted us at the front desk and invited us to his office for the opening conference. Inspector Walters and I then presented our credentials to Mr Brown and explained the reason for our visit. I also provided the Notice Regarding Proprietary/Confidential Business Information, the Small Business Resources Information Sheet, and gave an overview of the inspection process.

Mr. Brown was accommodating and stated that he had been working at Mac Manufacturing for about three weeks. As a result, he was unable to answer some of our questions involving process flow, facility history, or general operations, including whether the facility used wetting agents/fume suppressants in its plating baths. I informed Mr. Brown that Inspector Walters would be taking photographs and videos during the inspection, and to please inform us if any information gathered was considered Confidential Business Information by the facility.

The opening conference concluded at 1:15 PM.

c. Facility Walk-Through

The inspection team was escorted by Mr. Brown during the facility walkthrough.

The inspection included a thorough walkthrough of the facility and taking photographs and videos.

The walkthrough began at 1:35 PM. A digital photo log is Attachment 1 to this report.

Hand Line

As we left the office area and entered the plating area, I experienced a strong acid odor in the air and observed an employee vacuuming up a large amount of spilled liquid on the west side of the hand line. We then entered the hand line. The hand line is a series of plating tanks where parts are racked and loaded into tanks by hand. The hand line was on an elevated platform above a secondary containment. I observed large amounts of spilled liquid in the catch basin/secondary containment (photos P7140218 and P7140222). I also noted that all of the tanks, including the clear and yellow chromate, were uncovered, with the exception of the bright nickel tank (photo P7140221 and P7140223; see Table 1), which had a rectangle of thick plastic or rubber over it. We also observed a large amount of liquid in the secondary containment, with a buildup of trash floating in it (photo P7140219 and P7140275). Several of the hand line tanks were in very poor condition, including one badly bulging unlabeled tank in the chromate line (photo P7140225) and both electrolytic zinc tanks, one of which was so severely corroded that the internal tank liner was clearly visible from outside (photo P7140224). We also observed liquid in another part of the secondary containment which matched the color of the clear chromate tank process water (bottom of photo P7140225). The flooring of the hand line were large wooden plywood pieces, wet and heavily stained. Inspector Walters and I both agreed that it appeared that the tanks were leaking and that the amount of liquid indicated that it was not due to regular splashes or tank drag-out.

We were joined by an operator named Tony Rukmub, who was also unable to confirm whether the facility used wetting agents/fume suppressants in any of the plating baths. We asked if they had tank covers, and Mr. Rukmub stated that they had some, including for the clear and yellow chromate, but when asked where they were he pointed, vaguely, over to a corner. He also stated that the electrolytic zinc tanks used to have plywood covers, but they had been thrown away, and that the only tanks that were regularly covered were the bright nickel.

There was an old fume extraction system with several vertical hoods over various tanks, including one over the covered bright nickel tank. Mr. Brown informed us that this system had vented to atmosphere, but that the extraction fan had been out of commission for years. However, he was in the process of securing bids for a new one.

On the east side of the hand line, I observed an apparent leak from the secondary containment that had eaten away at the concrete over time (photos P7140273 and P7140274). Near this leak was a yellow chromate tank used for long items which was outside of the secondary containment (photo P7140257). Mr. Brown informed me that this tank was a temporary tank, filled from the yellow chromate tank in the hoist line for specific jobs, and that the liquid was put back into the larger tank when the job was done.

On the north side of the hand line, Inspectors Walter and Go observed a large amount of blue liquid on the floor that appeared to have spilled over or leaked from the secondary containment (photo P7140264). This liquid was the same approximate blue color as the fluid we had observed in the secondary containment, and as the clear chromate conversion tanks. We were unable to determine the depth or origin of this liquid due to safety considerations.

Table 1: List of Plating Tanks

Plating Tank	6W Metal HAP	Lid
Hand line		
Electroless Nickel	Yes	Yes
Clear Chromate	Yes	No
Yellow Chromate	Yes	No
Black Chromate	Yes	No
Olive Drab Chromate	Yes	No
Electrolytic Zinc #1	No	No
Electrolytic Zinc #2	No	No
Hoist line		
Electroless Nickel	Yes	Yes
Clear Chromate	Yes	No
Yellow Chromate	Yes	No
Black Chromate	Yes	No
Olive Drab Chromate	Yes	No
Electrolytic Zinc	No	No
Finishing area (long temporary tank)		
Yellow Chromate	Yes	No

Hoist Line

The hoist line consisted of larger plating baths serviced by an overhead hoist. The tanks were in a secondary containment and the walkways were covered with haphazardly placed plywood. Several tanks had low liquid levels (P7140226), but I was unable to ascertain whether this was due to leakage or evaporation. Like the hand line, only the nickel tank was covered (photo P7140230), with plywood and blue tarps.

The secondary containment around the hoist line was full to around an inch from the brim (photos P7140233, P7140258, and P7140259). There was liquid on ground around the edges of this secondary containment (P7140262), but I was unable to determine if they were overspills or leaks. The walkways for working on the hoist line were just above the liquid in the secondary containment, and some areas consisted of this wooden boards with no guard rails (photos P7140233 and P7140263). There was a power rectifier on the east side of the line, the exposed terminals of which were sticking into the narrow walkway on that side of the tanks at approximately knee height.

Wastewater Storage Area

As I crossed to the east side of the hoist line, I observed a very large number of drums and containers filled with liquid. Mr. brown informed me that these were full of untreated wastewater, and that they were unable to dispose of any water due to a combination of factors, including the previous owner of the facility filling all of the floor drains with cement several years prior. I asked how much time this wastewater had built up, and received a few

different answers from Mr. Brown and Mr. Rukmub. These responses varied from between a few months several years (to when the previous owner ran the facility).

The untreated wastewater was stored in a variety of different containers, including totes, barrels, buckets, and tanks (photos P7140234 to P7140256 and P7140267 to P7140272). Some of these containers appeared to be leaking from the bottom (photo P7140237, back left of P7140235 and back right of P7140234). We also observed crystallization in multiple places (photos P7140239, P7140237, and P7140247) as well as a variety of unidentified buildups and films on different liquid surfaces (photos P7140242, P7140244, P7140268, P7140269, and P7140272). While some containers were labeled with printed and handwritten signs that read "Untreated wastewater" or "Untreated water" (photos P7140238, P7140241, and P7140243), many were unmarked, or bore the markings of the previous contents (photo P7140246). All of the wastewater was stored in the storage area and were not within a secondary containment.

On the south side of the hand line were two large new plating tanks which Mr. Brown told us had been purchased to replace the corroded zinc baths, but which had been filled with wastewater due to lack of space (photos P7140254 and P7140255).

On the loading dock on the south side of the building I observed more wastewater stored in a variety of open containers sitting outside of the building with no cover (photos P7140276 to P7140278). Mr. Brown informed me that these were moved outside daily in order to create more space to work inside. One small drum stored outside was marked "toxic" (photo P7140278). Facility staff offered to open the small drum to see what was inside, but Inspector Walters and I declined.

Storage area

On the southeast side of the building was a small storage area for process chemicals and other materials. I observed corrosion that appeared to be compromising the structural integrity of several of the storage containers (photo P7140253). There was no secondary containment in the storage area.

Wastewater Treatment

The wastewater treatment system consisted of two treatment tanks, a filter press, and a wastewater evaporator (partially shown in photo P7140260). According to Mr. Rukmub wastewater is first placed in the flocculation tanks and treated with flocculants Floculite and Hexafloc (photos P7140265 and P7140266). The treated water is then pumped into the natural gas fired EMC Water Eater Model 375G for evaporation. The sludge from both parts of this process is run through the filter press.

Mr. Brown and Mr. Rukmub stated that only non-process water (i.e. rinse water and liquid from the secondary containment) was treated with this equipment, and that actual process water was generally packaged a disposed of through a hazardous waste disposal contractor along with the pressed sludge. However, when we asked what the concentrations of chemicals in the "non-process" water was, Mr. Rukmub told us it was only water. Inspector Walters explained that the rinse water would have contamination from the plating or surface treatment solutions and would contain HAPs. Mr. Rukmub and Mr. Brown responded that they did not know what chemicals were contained in the liquid, or how they determined the concentrations.

d. Closing Conference

At 2:05 PM., our group returned to the facility conference room to discuss the inspection and conduct the closing conference with Mr. Brown. I led the closing conference and summarized the parts of the facility we had visited during the inspection and our observations related to CAA, as well as other general concerns with what we had observed. I went through my inspection notes and described potential compliance concerns from the inspection. The following were identified as potential compliance concerns during the closing conference:

1. During the walkthrough we observed a high level of damage and disrepair throughout the plating lines, particularly corrosion threatening the integrity of plating tanks. Additionally, the amount of liquid in the secondary containments indicated possible tank leaks.
2. The facility did not appear to be minimizing spills or cleaning them up in a timely manner.
3. While the facility possessed some tank covers, they were not in use besides on the two nickel baths, leaving nine chromium containing tanks uncovered. The facility also did not appear to be using wetting agents or fume suppressants.
4. One chromium plating tank did not have secondary containment.
5. The secondary containments around both plating lines appeared to be leaking from multiple places.
6. The facility's long-term storage of wastewater was highly concerning. Wastewater of unknown composition was being stored in open, unmarked, containers with no secondary containment, and even outside. Additionally, there was evidence of numerous leaks in these storage vessels.
7. The facility's use and the condition of the wastewater evaporator was highly concerning. The operator was unable to provide much detail on how the facility pretreats the wastewater prior to evaporation and had a general misunderstanding of the chemical constituents in the wastewater. The wastewater treatment equipment and area was in very poor condition and in a secondary containment filled with liquid as well. Inspector Walters, Go and I had concerns that the wastewater was only being treated with a physical flocculant and therefore was not sufficiently pretreated to be evaporated safely without significant HAP emissions. We also had concerns that the spilled liquid, from the secondary containments, appeared to be a concentrated mixture of bath solutions and that its evaporation would result in significant HAP emissions.
8. The conditions of the facility presented multiple concerns to the health and safety of the employees.

While some of these concerns to not relate directly to the CAA, we informed Mr. Brown that they may represent Resource Conservation and Recovery Act (RCRA) compliance concerns. We also told him that we would be contacting RCRA regulators and informing them of what we had observed.

Following this discussion, I asked Mr. Brown for the following records, and (followed up by an e-mail requesting the same the next day):

1. All SDSs for materials stored or used at the facility during the last three years from today's date.
2. Purchase records for all materials reflected in the above SDSs.

3. All notifications provided to the Oregon Department of Environmental Quality or the U.S. E.P.A (e.g., initial notifications or notifications of compliance status) since the facility has been in operation.

7. Post inspection activities

Upon the return to our hotel after the inspection I called the Oregon Occupational Safety and Health Administration (OSHA) Tigard field office inf informed them of our observations at the facility. I then e-mailed and spoke to the EPA Region 10 Section Chief managing the RCRA program and informed them of our observations.

Upon sending my document request to Mac Manufacturing on July 15, 2022, morning I almost immediately received a call from Cody Standridge, the owner of the facility who lives in Tennessee. The conversation was congenial, and I informed Mr. Standridge of the compliance concerns I had identified in the closing conference, and that I had contacted both OSHA and RCRA following the inspection. Mr. Standridge also requested RCRA compliance assistance, which I told him I would pass along to ODEQ.

I received the response to my records request from Mr. Brown on August 5, 2022, and sent a follow-up request for the following information on August 8, 2022:

1. The make, model, and year of manufacture of the evaporator used for wastewater treatment at TFC Plating.
2. Any operating manuals, manufacturer specs, or other accompanying documents from the manufacturer of the evaporator.
3. Any written operating procedures pertaining to the wastewater evaporator.
4. All purchase records for the wastewater evaporator, including purchase date and vendor.
5. All operating and usage records since the installation of the evaporator.
6. Photos of any labels or markings on the wastewater evaporator.
7. A written description of how the facility handled wastewater prior to our inspection on July 14, 2022. Please include all steps taken to treat and store wastewater from rinse tanks, secondary containment, spills, and plating tanks.

I received the response to this second request on August 22, 2022.

On September 9, 2022, I sent a last request for additional information to Mr. Brown, asking for copies of their written operating SOP and amp-hour meter records for non-zinc plating baths. I received my first response to this query on September 12, 2022, and a second response on September 16, 2022. On September 20, 2022, I spoke to Mr. Brown on the telephone to confirm that my list of process tanks at the facility was accurate.

After reviewing the facility's responses and NESHAP Subpart WWWWWW, I have the following potential compliance concerns.

1. Subpart WWWWWW § 63.11509 (a) requires each owner or operator of an affected plating or polishing operation started on or before July 1, 2008, to submit an Initial Notification "not later than 120 calendar days after July 1, 2008, or no later than 120 days after the source becomes subject to this subpart, whichever is later." In addition, § 63.11509 (b) requires affected facilities to "submit an "Notification of Compliance Status…by the compliance date specified in § 63.11506…" The facility was unable to

provide a copy of an initial notification or notification of compliance status submitted to the US EPA or ODEQ.

2. Subpart WWWWWW § 63.11507 (g)(4) requires affected facilities to "use tank covers, if already owned and available at the facility, whenever practicable." Mac manufacturing possessed covers for several affected electroless chromium tanks in the hand line which were not in use..

3. Subpart WWWWWW § 63.11507 (g)(6) requires affected facilities to "perform regular repair, maintenance, and preventive maintenance of racks, barrels, and other equipment associated with affected sources, as practicable." The poor condition of equipment at Mac Manufacturing, and process tanks and secondary containment in particular, indicated a severe lack of maintenance at the facility.

4. Subpart WWWWWW § 63.11507 (g)(9) requires affected facilities to "perform general good housekeeping, such as regular sweeping or vacuuming, if needed, and periodic washdowns, as practicable." The presence of persistent leaks in secondary containment, large standing puddles of what appeared to be contaminated process water, leaks in dry and wet storage containers, full-to-the-brim secondary containment, garbage floating in secondary containment, buildup of residue on all equipment, and the general safety and cleanliness of the facility was not consistent with good housekeeping practices.

5. Subpart WWWWWW § 63.11507 (g)(10) requires affected facilities to "Minimize spills and overflow of tanks, as practicable." The numerous spills, leaks, standing puddles, full-to-the-brim secondary containment, and accumulated crystallization of chemicals present indicates that the facility has failed to minimize spills and overflow of tanks.

6. 40 C.F.R. Part 63 Subpart A § 63.6 (e)(1)(i) imparts the general duty that "At all times, including periods of startup, shutdown, and malfunction, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the owner or operator reduce emissions from the affected source to the greatest extent which is consistent with safety and good air pollution control practices." My observations during the inspection indicate that the facility has failed to operate and maintain the plating tanks in a manner consistent with safety and good air pollution control practices for minimizing emissions.

7. Section 10.2 of the facility's general permit (General ACDP AQGP-026) requires that subject facilities must "establish and maintain a written Standard Operating Procedures manual or equivalent) that describes how the facility's specific processes and procedures comply with each management practice of Condition 10.1." and that "An SOP compliant with this Condition must be developed and retained on site within six (6) months of assignment to this pe1mit or upon startup, whichever is later." The facility provided written directions for their plating processes, however, these documents did not describe procedures that related to complying with the general permit Condition 10.1.